

From wang!elf.wang.com!ucsd.edu!info-hams-relay Wed Apr 10 14:50:38 1991 remote  
from tosspot  
Received: by tosspot (1.64/waf)  
via UUCP; Wed, 10 Apr 91 21:37:03 EST  
for lee  
Received: from somewhere by elf.wang.com  
id aa23211; Wed, 10 Apr 91 14:50:37 GMT  
Received: from ucsd.edu by relay1.UU.NET with SMTP  
(5.61/UUNET-shadow-mx) id AA17141; Wed, 10 Apr 91 10:12:01 -0400  
Received: by ucsd.edu; id AA24526  
sendmail 5.64/UCSD-2.1-sun  
Wed, 10 Apr 91 04:30:59 -0700 for nixbur!schroeder.pad  
Received: by ucsd.edu; id AA24503  
sendmail 5.64/UCSD-2.1-sun  
Wed, 10 Apr 91 04:30:48 -0700 for /usr/lib/sendmail -oc -odb -oQ/var/spool/  
lqueue -oi -finfo-hams-relay info-hams-list  
Message-Id: <9104101130.AA24503@ucsd.edu>  
Date: Wed, 10 Apr 91 04:30:46 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams-relay@ucsd.edu>  
Reply-To: Info-Hams@ucsd.edu  
Subject: Info-Hams Digest V91 #285  
To: Info-Hams@ucsd.edu

Info-Hams Digest                      Wed, 10 Apr 91                      Volume 91 : Issue 285

Today's Topics:

    "Stray Voltage" on 60 Minutes  
        <None>  
        Address of J73TW  
        Feed lines  
        HEATH Radios  
        Keyers  
    Licensing Philosophy? (2 msgs)  
    No-Code Testing Questions  
    Shuttle Packet No-Show  
    To all European Readers of Info-Hams  
    TRF Receiver (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official

policies or positions of any party. Your mileage may vary. So there.

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Date: 9 Apr 91 22:31:44 GMT  
From: sdd.hp.com!mips!crisp@ucsd.edu  
Subject: "Stray Voltage" on 60 Minutes  
To: info-hams@ucsd.edu

In article <202@malta.sbi.com> kevinr@malta.sbi.com (Kevin Redden) writes:  
>In article <9104081906.AA22031@ucsd.edu>, wmartin@stl-06sima.army.mil (Will  
Martin) writes:

>> There was a 60 Minutes segment the night of Sunday, 7 April, that dealt  
>> with the problems caused to several dairy farmers by a power-company-  
>> caused condition called "stray voltage".  
>> ..... They used the "stray voltage" term roughly  
>> equivalently to saying "evil vapors" or some other archaic phrase to  
>> describe the cause of sickness.

>  
>I tuned in in the middle of the segment, so I missed any expalation that  
>may have been given. I too found their use of the term "stray voltage"  
>to be archaic, however, they did show literature produced by the power  
>utilities for farmers that used this same term. This tended to show that  
>the power companies used the same toerm to identify a real condition.

>  
>If anyone knows what this is, please post.

I would suggest that the problem is as was described by a previous poster;  
That the local neutral lines rise above true ground due to shoddy grounding.  
What wasn't explained was why the problem is so bad around areas where power  
lines run. I'll take a guess as to what the mechanism is. Maybe I am right,  
maybe I am wrong, But what the hay, it's only Internet!

The high tension long rang power distribution lines generally have very  
high voltages and very high currents when compared to normal residential  
distribution lines. Voltages in the 250KV range are common as are currents  
in the 1000 KA range. Clearly there are significant electric and magnetic  
fields surrounding these lines. Many farms have their pastures fenced by  
barbed wire which is an electrical conductor. I would suspect that the  
magnetic fields surrounding the lines link the fencing and induces  
currents to flow in the fencing. These currents wind up being sunk to ground  
which will raise the local ground potential. Depending on where the neutral  
line is tied, this can result in the local grounds being several volts  
away from the true ground.

One theory anyway!

--

Richard Crisp

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!decwrl!mips!crisp  
(408) 524-7250

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Date: 10 Apr 91 00:07:19 GMT  
From: stanford.edu!neon.Stanford.EDU!neon.stanford.edu!hatzakis@decwrl.dec.com  
Subject: <None>  
To: info-hams@ucsd.edu

Looking for a good mobile HF radio that is good with engine  
noise for a trip cross country... Can anyone give me suggestions on\  
what type of rig to buy, where to buy (used, that is) on a student  
budget, ie., few hundred dollars. Or if you have one to sell .. ?

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Date: 9 Apr 91 23:32:40 GMT  
From: sun-barr!newstop!west!stan@ames.arpa  
Subject: Address of J73TW  
To: info-hams@ucsd.edu

Would some kind soul please e-mail the address of J73TW ?  
Thanks.

73,

stan,kb6rqz

stan.galonski@West.Sun.COM

-----  
Date: 9 Apr 91 16:51:51 GMT  
From: sdd.hp.com!zaphod.mps.ohio-state.edu!uwm.edu!lll-winken!aunro!  
aupair.cs.athabascau.ca!lyndon@ucsd.edu  
Subject: Feed lines  
To: info-hams@ucsd.edu

gary@ke4zv.UUCP (Gary Coffman) writes:

>If you are running any reasonable amount of power, you \*will\* cross couple  
>enough into the CATV system to make TV viewers very unhappy with you. You

>should feed the cables through \*separate\* pieces of metal conduit where  
>they run side by side.

I don't know about that. Why not do a run of RG-214, or some other doubly  
shielded cable? If it'll keep RF out of the repeater input from 600 KHz  
away, it should do the trick over a 24 MHz split. I assume he's running  
a low pass filter as well ...

--

Lyndon Nerenberg VE6BBM / Computing Services / Athabasca University  
atha!cs.athabascau.ca!lyndon || lyndon@cs.athabascau.ca

Packet: ve6bbm@ve6bbm.ab.can.noam

The only thing open about OSF is their mouth. --Chuck Musciano

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Date: 10 Apr 91 02:08:40 GMT

From: swrinde!mips!cs.uoregon.edu!milton!sumax!halcyon!raoul@ucsd.edu

Subject: HEATH Radios

To: info-hams@ucsd.edu

Anyone wonder why Heath is out of the Ham Biz? I'm getting an HW9- It is  
supposed to be the best QRP rig available. Has anyone else out there  
built one?

Reply here or via Packet

Jeff Benedict

KB7AIL@VE7VBB.#VIC.BC.CAN.NA

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halcyon!raoul@seattleu.edu

The 23:00 News and Mail Service - +1 206 292 9048 - Seattle, WA USA

+++ A Waffle Iron, Model 1.64 +++

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Date: 9 Apr 91 19:43:47 GMT

From: swrinde!cs.utexas.edu!csc.ti.com!ti-cs!tilde.csc.ti.com!axis!

sqa.dsg.ti.com!edh@ucsd.edu

Subject: Keyers

To: info-hams@ucsd.edu

I started to order the board and parts for the Super CMOS keyer  
as described in the QST article, but then Heathkit put their  
keyer on sale. Since it has most of the features of the Super CMOS,  
and has built-in capacitance key paddles (and I've built several  
other Heath projects) I ordered it. It has a simple two push button  
command to switch left vs. right also! Or you can wire it that way  
if you chose. It is my first experience with iambic keying, but then

again I don't have to many bad habits to break. My wife is have a tougher time, as she keeps a)trying to move the fixed touch paddles and b)treating the keyer like a side-swiper instead of iambic! So far I really like this keyer, even the capacitance paddles (which some people don't like). If I ever develop a yen for external (moveable) paddles, the connection jack is already there waiting. Maybe my brain is reversed, but so far I'm finding almost as easy to key (at my slow speed) left or right handed without reversing the paddles. We'll see how long that lasts! 73 ---

--

Ed Humphries	Texas Instruments, Inc. 512-250-6894
N5RCK	Internet ed.humphries@hub.dsg.ti.com
-. ..... -. -. -. -. -	Packet N5RCK@NA4M

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Date: 9 Apr 91 20:07:54 GMT  
From: swrinde!cs.utexas.edu!csc.ti.com!ti-csl!tilde.csc.ti.com!axis!  
sqa.dsg.ti.com!edh@ucsd.edu  
Subject: Licensing Philosophy?  
To: info-hams@ucsd.edu

In article <9104091411.AA05137@trout.nosc.mil> mertes@stl-07sima.army.mil (Ed Mertes) writes:

>

>I guess the law must have changed since I built my Heathkit CB Tranceivers  
You guess correctly. Also, back then, YOU had to have a license to  
operate a C.B. AND, the design was type-accepted.

>to the transmitter using an included light bulb for a dummy load.  
Please don't do this today! You'd be amazed at the propagation out  
of a light bulb!

>

>Did Heathkit create thousands of Federal Law Breakers back then? Are they  
>still selling CB kits?

No. Heath has not sold CB kits for quite a while. Sigh. Times change,  
I have no certain knowledge, but it looks like they may be backing out  
of the ham marketplace (again). Anyone have proof one way or the other?

73 -

--

Ed Humphries	Texas Instruments, Inc. 512-250-6894
N5RCK	Internet ed.humphries@hub.dsg.ti.com
-. ..... -. -. -. -. -	Packet N5RCK@NA4M

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Date: 10 Apr 91 03:37:06 GMT

From: swrinde!zaphod.mps.ohio-state.edu!unix.cis.pitt.edu!dsinc!wells!  
k3tx@ucsd.edu  
Subject: Licensing Philosophy?  
To: info-hams@ucsd.edu

What's this about needing a 2nd class phone license  
to work on a CB rig?

I lost my phone licenses a few years ago (1st phone)  
and ended up with a General Certificate which means  
plain nothing.

There are no more phone licenses in USA. There is the  
commercial CW license - 3, 2, 1, required for some  
maritime operations.

As for CB =- who cares? Esp. FCC. They just hope  
it will die a natural death and fade away.

K3TX

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Date: 8 Apr 91 21:34:43 GMT  
From: hpda!hpcupt1!hprnd!jblake@hplabs.hpl.hp.com  
Subject: No-Code Testing Questions  
To: info-hams@ucsd.edu

In rec.ham-radio, swood@vela.acs.oakland.edu ( EVENSONG) writes:

Alright, now that the no-code is here, I have a lot of people asking  
me to get them tested. I have gotten all my VE goodies from the ARRL more  
than  
a year ago, and I am at a loss to the how-to's of the no-code. Is the no  
code tech restricted to VE's, or can Generals and above (two in number) give  
the test (seeing that it is a new 'entry level' license)??  
If VE's are required to give the test, than how do you make one up?  
I am to understand that the questions are from a combined pool of Novice  
and Tech questions, but how do you know which ones to use to make up  
the 55 question total?

I was at a VE exam session yesterday. For the no-code-tech applicants, the  
VE's were administering Elements 2 and 3A. A couple of brave individuals  
decided to attempt Element 1A also, and passed. To my understanding, both  
groups (code, no-code) will receive the same licenses, i.e. TECHNICIAN. The

only difference will be that the ones who passed 1A will have a CSCE that will so indicate, and they will have Novice HF privileges in addition to Technician VHF and above privileges.

-John

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*****
John Blake, KC6ORN                      Email:  jblake@hprnd.rose.hp.com
Hewlett Packard Co., M.S. R3SI
8000 Foothills Blvd.                   Phone:  (916) 785-4337
Roseville, CA 95678
*****
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Date: 9 Apr 91 22:12:50 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Shuttle Packet No-Show  
To: info-hams@ucsd.edu

I read N6SJD's message about shuttle SSTV with interest. I've been wondering what the !@#%\$ happened to the shuttle packet stuff. I listened for a few orbits Saturday and Sunday -- not a peep on any of the frequencies. On Saturday I heard voice on 145.59 that sounded like them, and was Doppler-shifted like the real thing, but nary a packet.

Then I got smarter and read the shuttle activity schedule. I found "Unscheduled SSTV and Packet Activity" scheduled for four orbits Monday morning. Aha, you silly fool, shame on you for wasting your time.

So I gave up a few hours sleep and tried again on a couple of orbits Monday morning. Nothing but white noise and a few other crazies sending connect messages on the uplink.

I was listening on my Oscar 13 setup, with KLM beam, az and el rotators, low-noise preamp, and all that stuff. I have to admit I was too embarassed to complain for fear I had still managed to screw up and use the wrong frequency or set the clock back instead of forward or something else stupid. Maybe that still was the case.

However, I think I can fairly safely conclude that the much hyped shuttle packet was a no-show. Does anyone know why?. The EVA Monday was in progress during that time. Did that preclude packet?

I'm not gonna complain too loudly because I only lost a few hours sleep. But I do resent all the trees that died, all the bits on all the BBS disks that are only good for the bit bucket, all the wasted bandwidth explaining how to set FRACK and DWAIT and FULLDUP OFF. If we say we're gonna do it, guys and gals, then let's do it and not just jerk a bunch of people around. I really feel sorry for anyone at W5RRR who worked on the packet stuff and saw it go unused.

To add insult to injury, at one point I tuned across 145.55 and what to my wondering eyes appeared but a storm of packets to and from U2MIR!

Can anyone explain what happened?

Randy Cole  
KN6W  
cole@babette.isi.edu

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Date: 10 Apr 91 08:40:00 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: To all European Readers of Info-Hams  
To: info-hams@ucsd.edu

#### Italian Amateur Radio Bands and Subbands Allocation - Update 9-Apr-1991

Band from	to	MHz	Service	MaxPWR	W	Notes
1.830	1.850		shared	100		Zone 9 1.830 to 1.845 only
3.5	3.8		shared	300		
7	7.1		exclusive	300		with satellite service
10.10	10.11		shared	300		only A1A F1A
14	14.350		exclusive	300		with satellite service
18.068	18.168		shared	300		with satellite service
21	21.450		exclusive	300		with satellite service
24.89	24.99		shared	300		with satellite service
28	29.7		exclusive	300		with satellite service
50.15125	50.16375		shared	10		only A1A J3E-USB (*)
144	146		exclusive	300	(10)	with satellite service
432	434		shared	300	(10)	(**)
435	436		exclusive	300	(10)	with satellite service
436	438		shared	300	(10)	satellite service
1240	1245		shared	300	(10)	
1267	1270		shared	50	ERP	satellite uplink
1296	1298		shared	50	ERP	
2303	2313		shared	300	(10)	



2440	2450	exclusive	300 (10)	with satellite service
5650	5670	shared	300 (10)	with satellite uplink
5760	5770	exclusive	300 (10)	
5830	5850	shared	300 (10)	with satellite uplink
10.45 G	10.50 G	exclusive	300 (10)	with satellite service
24.00 G	24.05 G	exclusive	300 (10)	with satellite service
47.0 G	47.2 G	shared	300 (10)	with satellite service
75.5 G	76.0 G	shared	300 (10)	with satellite service
142 G	144 G	shared	300 (10)	with satellite service
248 G	250 G	shared	300 (10)	with satellite service

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#### NOTES

(\*) - Use of 6-m band is granted upon request with a duration of 1 year, renewable. Band is very narrow, so only CW & USB are allowed.

(\*\*)- Note that 434 to 435 MHz band is NOT assigned to amateurs.

Powers in brackets are those allowed to owner of 'special' license (IW#...)

#####

#### CEPT in Italy

Since February 1991, also Italy has the proper laws for application of CEPT recommendation. So Hams from member states can come in Italy with their licence without any other permission, provided that they have the CEPT licence.

Class 1 CEPT is equivalent to Italian 'Ordinary' license (IK#...)

Class 2 CEPT is equivalent to Italian 'Special' license (IW#...)

Suppose that F3XX is owner of a class 1 cept, when he'll come to Italy, he will sign IK/F3XX/P or IK/F3XX/M, depending whether he's Portable or Mobile. Suppose that DL1XY is owner of a class 2 cept, he'll sign IW/DL1XY/P or .../M

'Portable' is any station that is not mounted on a car or vehicle. So if you connect your 220V cord to a socket in your hotel room or in your camping area, you're considered 'Portable', while if you are driving down from Milan to Florence, you're 'Mobile', even though you're using a battery-powered HT.

Remember that in Italy field or mobile operation is NOT ALLOWED BELOW 144 MHz.

At the present moment I have no information whether 6m is granted also to visiting hams or only to residents.

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I hope I've confused you enough! I'm here for any further information or discussion. In any case, you can refer to

ARI - via Scarlattti - Milano

for any deepest question.

Similar band plans for other European states would be very appreciated.

73 de IK5PVX  
Pierfrancesco Caci

E-mail: FIRE@FIRENZE.INFN.IT (bitnet)  
39331::FIRE (decnet)

-----  
Date: 9 Apr 91 22:07:44 GMT  
From: swrinde!mips!cs.uoregon.edu!milton!whit@ucsd.edu  
Subject: TRF Receiver  
To: info-hams@ucsd.edu

In article <1991Apr9.124118.27031@mlb.semi.harris.com>  
rps@sunman.mlb.semi.harris.com (Ray Sumperly) writes:

> Can anybody supply me with a schematic for a tube TRF receiver?

No such devices have been built by THAT name in most of a century. Any of the '60s vintage Radio Amateur Handbooks, though, will have 'grid-dip meter' construction articles, and a grid dip meter is exactly a TRF receiver (not terribly sensitive, though, as they usually leave out the preamplification). After mid-60's, the grid-dip meters used MOSFETs (what's a 'grid' in a MOSFET?).

John Whitmore

-----  
Date: 10 Apr 91 05:57:41 GMT  
From: brian@ucsd.edu  
Subject: TRF Receiver  
To: info-hams@ucsd.edu

In article <1991Apr9.220744.4049@milton.u.washington.edu>  
whit@milton.u.washington.edu (John Whitmore) writes:

> No such devices have been built by THAT name in most of  
> a century.

I beg to differ, grasshopper. I built a TRF in junior high school, the Philco and Atwater-Kent radios were TRFs for a while, and even old grandpop built them when he was working for Lee DeForest - out of triode valves he built himself, yessindeed.

Half a century, maybe. This isn't 2030 yet, not by a long row of trees.

- Brian  
(in old fart mode)

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Date: 9 Apr 91 23:54:50 GMT  
From: news-mail-gateway@ucsd.edu  
To: info-hams@ucsd.edu

References Faunt, N6TQS, 415-688-8269)  
Subject : keyers (sorta)

My great uncle was a telegrapher for the railroad in his youth, in the early part of the century, and while he used his right hand for the bug, he learned to write with his left hand so that he could do both simultaneously. He had a stroke when I was very young, and could not communicate very well, but I've wondered, since I've become a little more knowledgeable, if he could have still sent and received code well.  
73, doug

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Date: 10 Apr 91 05:46:19 GMT  
From: swrinde!elroy.jpl.nasa.gov!sdd.hp.com!wuarchive!udel!haven!wam.umd.edu!rustyh@ucsd.edu  
To: info-hams@ucsd.edu

References <1991Apr5.144823.2094@ux1.cso.uiuc.edu>, <2701@ke4zv.UUCP>, <1991Apr9.125716.5551@wam.umd.edu>  
Subject : Re: Antenna Matching Gedanken Experiment

In an earlier article I said:

>Note that this will generally be  
>a much higher resistance than the internal resistance of the device so  
>that there will not be MAXIMUM power transfer.

>

I made a bit of a Boo Boo here. The resistance of the device is much HIGHER than the load! (But my argument still holds)  
I quote from a Motorola Ap Note AN-721:

"The internal resistance of the transistor is supposed to be much higher than the load and is normally neglected. In the case of a relatively low internal resistance, the efficiency of the device would decrease by the factor:

$$1 + (RL/RT)$$

where RL is the load resistance, seen at the collector-emitter

terminals, and  $R_T$  the internal transistor resistance.

.....etc

[ Here is the Punch Line ]

The load value is primarily dictated by the required output power and the peak voltage; it is not matched to the output impedance of the device.

...etc

Strictly speaking, impedance matching is accomplished only at the input. Interstage and load matching are more impedance transformations of the device input impedance and of the load into a value  $R_L$  that depends essentially on the power demanded and the supply voltage. "

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If your interested in getting a clear understanding of the subject, you should read these Ap-notes. They were in the Motorola RF Device Data Book Volume II. AN-721 "Impedance Matching Networks Applied to RF Power Transistors" by B. Becciolini and AN-282A "Systemizing RF Power Amplifier Design" by Roy Hejhall. Well written and easy to follow.

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Michael Katzmann (VK2BEA/G4NYV/NV3Z) Please email to this address |  
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End of Info-Hams Digest

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